

United States
Department of the Interior
Bureau of Land Management

Miles City Field Office

Horizontal Oil Well
Whiting Oil & Gas Corp

Determination of NEPA Adequacy
DOI-BLM-MT-C020-2013-0045-DNA

For Further Information Please Contact:

Bureau of Land Management
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301
406-233-2800

BLM



Worksheet Documentation of NEPA Adequacy (DNA)

U.S. Department of the Interior
Bureau of Land Management (BLM)

BLM Office: Miles City Field Office

NEPA Number: DOI-BLM-MT-C020-2013-045-DNA

Case File/Project No: MTM97522

Proposed Action Title/Type: The proposed action is to drill and produce one horizontal Bakken oil well in Richland County, Montana.

Location/Legal Description: T. 26 N., R. 57 E., Section 9, SW¼SW¼ in Richland Co, MT (See Map 1-Well Location).

BACKGROUND:

This DNA has been prepared in response to an APD submitted by Whiting Oil & Gas Corp. The proposed Kittleson Federal 14-9-1H well would be a horizontal oil well drilled from a proposed four well pad located on private surface, private mineral, and would penetrate a federal lease, approximately 1/4 miles to the north, and would produce from the Bakken formation. This location is private surface situated over private minerals (not located on the Federal lease).

Because the surface location of this well is located on private land and off of the Federal lease, the requirements for protection of surface resources and mitigation of environmental impacts resulting from locating and constructing the well site would be primarily subject to state or local regulation.

Description of the Proposed Action: This alternative includes drilling, completion, production, abandonment of a federal horizontal oil well and associated access road, well pad, and production facilities (See Table 1 and location map in APD). The operator proposes to begin these operations December 30, 2012, with drilling operations lasting approximately 65 days.

Table 1

Well, Lease Number, Surface Ownership	Well Location	Pad Size (footages, bearing) (acres & max cut/fill)	Access Road (footages, bearing) (acres)
Kittleson Federal 14-9-1H MTM97522	T26N, R57E, Section 9, SW¼SW¼, 50' FNL, 965' FWL	350' X 560' E (6.3 acres; 0.9' /6.5')	8,157' x 30E' (5.6 acres)
Total Acres Disturbed: 11.9 acres	---	6.3 acres	5.6 acres

Well Site Drilling

The proposed well site would be located on private surface in native rangeland. The drilling operation would start upon receipt of an approved application for permit to drill, and would take approximately 65 days after spudding, followed by additional time for well completion and installation of production facilities. The proposed well would be horizontally drilled with a closed loop system into the Bakken Formation to an approximate total measured depth (TMD) of 20,499 feet. Surface casing (9 5/8") would be set at approximately 2,000 feet and cemented back to the surface. The well would then be drilled below the casing to an approximate TMD of 20,817 feet. Hydrogen Sulfide gas may be encountered and an H₂S Contingency Plan has been submitted with this APD. An appropriately sized Blowout Preventer (BOP) would be used to control the well and prevent an accidental release of hydrocarbons or salt water into the environment.

Fresh water mud would be used while drilling down to surface casing setting depth, and invert (oil based) mud system would be used for drilling the production casing section of the well. The horizontal section of the well would be drilled using a brine drilling fluid. The well would be fracture stimulated and completed for production if economically recoverable quantities of oil are found. The well would be plugged according to federal requirements when no longer needed.

At the drilling location, drilling cuttings would be placed into two cuttings pits approximately 250' L x 45' W x 12' deep and 150' x 45' x 12' deep. The pits would be excavated in "cut" material on the pad. All drilling fluids, including any salts and/or chemicals utilized in the mud system would be contained within a closed loop system and then hauled to an approved disposal facility. The water and/or oil based drilling fluids would be stored in 400 barrel (bbl) steel tanks on the location in an area that would be diked. These fluids would be recycled during drilling operation by centrifuging the returns to separate the drilled cuttings from the oil and water based fluids. Upon completion, remaining oil and water based fluids would be collected and disposed of at an approved facility.

The drilling cuttings would be disposed by back filling of the cutting pit. Cuttings would be buried at least 3-feet below re-contoured grade. Trash would be collected in a closed trash container and hauled to a permitted disposal site. Sewage would be contained in approved collectors and disposed of at an off-site approved facility. Disposal of all solids and liquids (drilling fluids/cuttings, produced water, trash, and sewage) would meet all state and county requirements.

Immediately after removal of the drilling rig, all debris and other materials not contained in the trash cage would be cleaned up and removed from the well location. No potentially adverse materials or substances would be left on the location.

Well Site Production

The well pad surface production facilities for this proposed well would consist of a pump jack at the wellhead, flare pit, heater treater, 6 – 400 bbl oil tanks, and 2 – 400 bbl produced water tanks. The production facilities would be painted Covert Green to blend into the surrounding background color of the landscape. The tanks and heater treater would be surrounded on four sides by an impermeable dike which would hold 110% of the capacity of the largest vessel and would be independent of the back cut. Load lines would be located within the tank battery berm and would have a drip barrel installed under each outlet.

Applicant: Whiting Oil & Gas Corp.

County: Richland County, MT

DNA Originator: Rick Lang, Natural Resource Specialist

B. Land Use Plan (LUP) Conformance

LUP Name* Big Dry RMP/EIS Date Approved 4/96

Other document** DOI-BLM-MT-C020-2012-205-EA Date Approved 7/12/2012

**DOI-BLM-MT-C020-2012-272-EA Date Approved 9/28/2012

**List applicable LUPs (for example, resource management plans; activity, project, management, or program plans; or applicable amendments thereto)*

The proposed action is in conformance with the applicable LUPs because it is specifically provided for in the following LUP decisions:

The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (objectives, terms, and conditions)

Big Dry - Production and Development p. 321-325

C. Identify applicable National Environmental Policy Act (NEPA) document(s) and other related documents that cover the proposed action.

List by name and date all applicable NEPA documents that cover the proposed action.

EA#: DOI-BLM-MT-C020-2012-205 Whiting Oil and Gas. [..\..\MCFO_EA_Final\OIL & GAS EAs & DNAs\Whiting Pet\EA_Whiting_3well_Richland Co.docx](#)

EA#: DOI-BLM-MT-C020-2012-272-EA Brigham Oil & Gas LP [..\..\MCFO_EA_Final\OIL & GAS EAs & DNAs\Brigham O&G LP\EA_Brigham_1well_28N_59E.docx](#)

List by name and date other documentation relevant to the proposed action (e.g., source drinking water assessments, biological assessment, biological opinion, watershed assessment, allotment evaluation, rangeland health standard's assessment and determinations, and monitoring the report).

Cultural Resource Report: MT-020- MT-020-12-384

D. NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial? The existing analysis is adequate with regard to the proposed action. The referenced EA analyzed impacts related to drilling an oil well in the same geographical area. No significant new information or circumstances related to the proposed action have developed since completion of the referenced EA. The referenced EA was completed in the year 2012.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, resource values? Yes, the RMP and EA analyzed alternatives, including "No Action".

3. **Is the existing analysis valid in light of any new information or circumstances (such as rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstance would not substantially change the analysis of the new proposed action?** The existing analysis is adequate with regard to the proposed action. No significant new information or circumstances related to the proposed action have developed since completion of the referenced EA. The referenced EA was completed in 2012.

4. **Are the direct, indirect and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?** Yes, the actions proposed would have the same direct and indirect impacts as those analyzed in the RMP, and more specifically addressed in the referenced EA.

5. **Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?** Yes, the RMP/FEIS had public and interagency review in its analysis. In addition, the public has had opportunity to review our EA upon the MCFO posting period, while the specialists were involved in the EA approval.

E. Interdisciplinary Analysis: Identify those team members conducting or participating in the preparation of this worksheet.

REVIEWERS	TITLE	ASSIGNMENT	DATE/INITIALS
Dale Tribby	Wildlife Biologist	Wildlife	12/17/2012 <i>dct</i>
Doug Melton	Archaeologist	Cultural Report	01/14/13 DM Cultural Report MT-020-12-384
Paul Helland	Petroleum Engineer	Subsurface Resources	12-18-2012 PH
Dan Benoit	Supervisory NRS	Reviewer	1/14/13 DAB



Environmental Coordinator

1/14/2013
Date

F. Mitigation Measures: List any applicable mitigation measures that were identified, analyzed, and approved in relevant LUPs and existing NEPA document(s). List the specific mitigation measures or identify an attachment that includes those specific mitigation measures. Document that these applicable mitigation measures must be incorporated and implemented.

See Conditions of Approval Below

CONCLUSION

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA.

Note: If one or more of the criteria are not met, a conclusion of conformance and/or NEPA adequacy cannot be made and this box cannot be checked.



 Todd Yeager
 Field Manager
 Miles City Field Office

1/15/2013
Date



United States Department of the Interior



In Reply To:

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301-7000
<http://www.blm.gov/mt>

3160 (MTC022)
MTM 97521

Whiting Oil & Gas Corp.
c/o H&B Petroleum Consultants
Attn: Michael Brown
P. O. Box 847
Mills, Wyoming, 82644

Dear Mr. Brown:

Your application to drill the Kittleson Federal 14-9-1H on Federal Lease MTM 97522 located in SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 9, T. 26 N., R. 57 E., Richland County, Montana, is approved subject to the provisions of the Application for Permit to Drill, including the drilling and surface use programs submitted with your application, plus the following Conditions of Approval.

CONDITIONS OF APPROVAL

1. Site Specific:

As per the USFWS Standard Conditions and Recommendations, work would cease if whooping crane sightings occur within one mile of the proposed project area. In coordination of the Service, work may resume when the crane(s) have left the area.

A. Production Facilities:

1. If a tank battery is constructed on location, each tank setting, treater, and separator, must be surrounded on all sides by an impermeable dike of sufficient capacity to adequately contain 110% of the contents of the largest vessel within it, plus one (1) day's production.
2. Any portion of the tank battery, or other semi-permanent production facilities built on the well pad that is formed of backfill and not part of the cut shall be placed in 6 to 8 inch lifts and compacted using generally approved compaction equipment to about 90 percent proctor density (American Society for Testing and Materials (ASTM) D 1557- 70).

B. Drilling Operations:

1. The pit shall be fenced on three sides during drilling operations and the fourth side after completion of drilling operations. The fence shall be constructed to the following requirements: posts to be no more than 16' apart; fence wire: four wires of at least 12.5 gauge, double strand twisted; two stays between posts; wire stretched taut between brace panels, wire spacing from the ground up: 14", 22", 30", 42" OR steel panels may be used to fence the pit. If steel panels are used, a steel post shall be placed every 4' to reinforce

panels. Fence shall be maintained to prevent livestock and wildlife from entering the area until pit is reclaimed.

2. Storage tanks must be on the pad and surrounded with a dike and trench sloped to the reserve pit.
3. If cuttings pit contains any fluids during active drilling, it shall be netted to prevent the entry of migratory birds and other wildlife.
4. If cuttings pit contains any fluids, a minimum of 2 feet of freeboard shall be maintained in the pit
5. The pit shall be lined with a minimum 12 millimeter impermeable synthetic liner and permeability $< 10^{-7}$ cm/sec; resistant to UV, weathering, chemicals, punctures, and tearing; and be placed on bedding material if bedrock is abrasive. The liner shall be installed in accordance with the manufactures requirements on material that will not tear or puncture the liner.
6. At a minimum, a cement bond log must be run from maximum depth possible in the 7" production casing to surface casing shoe (or top of cement whichever is deeper).
7. All well control equipment shall comply with the minimum standards in Onshore Order #2 for a 5M system.
8. If H₂S is encountered in excess of 100 ppm in the gas stream, the operator shall immediately ensure control of the well, suspend drilling ahead operations (unless detrimental to well control), and obtain materials and safety equipment to bring the operations into compliance with applicable provisions of Onshore Order No. 6. The operator shall notify the authorized officer of the event and the mitigating steps that have or are being taken as soon as possible, but no later than the next business day.

C. Pit reclamation:

1. If cuttings pit contains fluids and active drilling is not occurring, operator shall reclaim pit immediately upon cessation of drilling operations or shall net the entire pit to prevent the entry of migratory birds and other wildlife until the pit is reclaimed.
2. All pit(s) shall be emptied of all fluids within 90 days after completion of drilling operations.
3. The pit may not be cut or trenched.
4. The pit material shall be covered with a minimum of 3 feet of overburden. The pit shall be closed properly to assure protection of soil, water, and vegetation.

D. Waste Disposal:

1. Any materials classified as nonexempt hazardous wastes shall be disposed of in an EPA approved facility.
2. Burning of materials or oil is not allowed.

2. Verbal Notifications

The following notifications shall be made to the BLM, Miles City Field Office (MCFO) (406) 233-2800, or after business hours to the appropriate individual's home phone shown on the list attached.

- A. Notify this office verbally at least 48 hours prior to beginning construction.
 - B. Notify this office verbally at least 12 hours prior to spudding the well (to be followed up in writing within 5 days).
 - C. Notify this office verbally at least 12 hours prior to running any casing or conducting any BOP tests (to be followed up in writing within 5 days).
 - D. Notify this office verbally at least 6 hours prior to commencing any DST test.
 - E. Notify this office verbally at least 24 hours prior to plugging the well to receive verbal plugging orders.
 - F. Notify this office verbally at least 24 hours prior to removal of fluids from the reserve pit.
3. A complete copy of the approved Application for Permit to Drill (APD), including conditions, stipulations, and the H2S contingency plan (if required) shall be available for reference at the well site during the drilling phases. **A copy of the approved Surface Use Plan of Operations and Conditions of Approval (COAs) shall be provided to the surface owner(s) prior to initiating construction.**
 4. This drilling permit is valid for either two years from the approval date or until lease expiration, whichever occurs first.
 5. The abandonment marker shall exhibit the same information required for the well sign. The abandonment marker (steel plate welded to surface casing 4' below ground level) shall be installed when the well is plugged.
 6. The operator shall be responsible for obtaining all necessary authorizations and permits related to conducting operations for the proposed well.
 7. Additional requirements may be imposed if changes in operational and/or environmental conditions dictate.
 8. This office shall be notified in writing if the well pad has been constructed but no drilling operations have been initiated within 6 months of the construction.

9. If any cultural values (sites, artifacts, human remains, etc.) are observed during operation of this lease/permit/right-of-way, they are to be left intact and the Miles City Field Office notified. The authorized officer will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is immediately to stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days, the AO will inform the operator as to:
 - A. whether the materials appear eligible for the National Register of Historic Places;
 - B. the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
 - C. a timeframe for the AO to complete an expedited review under 35 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

You have the right to request a State Director Review of this decision and these Conditions of Approval pursuant to 43 CFR 3165.3(b). An SDR request, including all supporting documentation must be filed with the Montana State Office, State Director (MT-920) at 5001 Southgate Drive, Billings, Montana 59101-4669 within 20 business days of your receipt of this decision. If adversely affected by the State Director's decision, it can be further appealed to the Interior Board of Land Appeals (IBLA) pursuant to 43 CFR 3165.4, 43 CFR 4.411, and 43 CFR 4.413. Should you fail to timely request an SDR, or after receiving the State Director's decision, fail to timely file an appeal with IBLA, no further administrative review of this decision will be possible.

INFORMATIONAL NOTICE

This is not a complete list of requirements, but is an abstract of some major requirements.

1. General Requirements

- a. The lessee or designated operator shall comply with applicable laws and regulations; with the lease terms, Onshore Oil and Gas Orders; NTL's; and with other orders and instructions of the authorized officer. Any deviation from the terms of the approved APD require prior approval from BLM (43 CFR 3162.1(a)).
- b. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease due to a lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.

2. Drilling Operations (Onshore Order No. 2)

- a. If DST's are run, all applicable safety precautions outlined in Onshore Order No. 2 shall be observed.
- b. All indications of usable water (10,000 ppm or less TDS) shall be reported to the Miles City Field Office prior to running the next string of casing or before plugging orders are requested, whichever occurs first.

3. Well Abandonment (43 CFR 3162.3-4, Onshore Order No. 1 - Sec. V)

Approval for abandonment shall be obtained prior to beginning plugging operations. Initial approval for plugging operations may be verbal, but shall be followed-up in writing within 30 days. Subsequent and final abandonment notifications are required and shall be submitted on Sundry Notice (Form 3160-5), in triplicate.

4. Reports and Notifications (43 CFR 3162.4-1, 3162.4-3)

- a. Within 30 days of completion of the well as a dry hole or producer, a copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions or data obtained and compiled during the drilling, workover, and/or completion operations shall be filed with a Completion Report (Form 3160-4), in duplicate.
- b. In accordance with 43 CFR 3162.4-3, this well shall be reported on the Oil and Gas Operations Report (OGOR, MMS-4054), starting with the month in which drilling operations commence, and continuing each month until the well is physically plugged and abandoned.
- c. Notify this office within 5 business days of production start-up if either of the following two conditions occur:
 - (1) The well is placed on production.
 - (2) The well resumes production after being off of production for more than 90 days.
"Placed on production" means shipment or sales of hydrocarbons from temporary tanks, production into permanent facilities or measurement through permanent facilities.

Notification may be written or verbal with written follow-up within 15 days, and must include the following information:

1. Operator name, address, and telephone number.
 2. Well name and number, county and state.
 3. Well location, "¼¼", Section, Township, Range, P.M."
 4. Date well begins or resumes production.
 5. The nature of the well's production; that is crude oil, or crude oil casing gas, or natural gas and entrained liquid hydrocarbons.
 6. The Federal or Indian lease number.
 7. As appropriate, the Unit Agreement name, number and Participating Area name.
 8. As appropriate, the Communitization Agreement number.
- d. As per Onshore Order No. 6, A.2.b., the "operator shall initially test the H₂S concentration of the gas stream for each well or production facility..." Submit the results of this test within 30 days of filing Form 3160-4, "Well Completion or Recompletion Report and Log".
5. Environmental Obligations and Disposition of Production (43 CFR 3162.5-1, 3162.7-1 and 40 CFR 302-4)
- a. With BLM approval, water produced from newly completed wells may be temporarily stored in reserve pits up to 90 days. During this initial period, application for the permanent disposal method shall be made to this office in accordance with Onshore Order No. 7. If underground injection is proposed, an EPA or State permit shall also be obtained. If surface discharge of produced water is proposed, an MPDES permit shall also be required.
 - b. Spills, accidents, fires, injuries, blowout and other undesirable events shall be reported to this office within the timeframes in NTL-3A.
 - c. You are required to take all necessary steps to prevent any death of a migratory bird in pits or open vessels associated with the drilling, testing, completion, or production of this well. The death of any migratory bird found in such a pit or open vessel is a violation of the Migratory Bird Treaty Act and is considered a criminal act. Any deaths of migratory birds attributable to pits or open vessels associated with drilling, testing, completing or production operations must be reported to this office and the United States Fish and Wildlife Service within 24 hours.

We may require that the pit be designed or the open vessel be covered to deter the entry of birds in any facility associated with drilling, testing, completion or production of this well. Fencing, screening and netting of pits may be required as a means to deter bird entry. These conditions would most likely be imposed to prevent the entry of migratory birds if oil is left in pits or open vessels after the cessation of drilling or completion of operations, if water disposal pits consistently receive oil, or if pits or open vessels are used repeatedly for emergency situations which result in the accumulation of oil.

Voluntary pit fencing, screening and netting, or sealing vessels, is encouraged to avoid potential

instances that may result in the death of a migratory bird.

- d. Gas produced from this well may not be vented or flared beyond an initial, authorized test period of 30 days or 50 MMCF following its completion, whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue the venting or flaring as uneconomic is granted, and you shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

6. Well Identification (43 CFR 3162.6)

Each drilling, producing or abandoned well shall be identified with the operator's name, the lease serial number, the well number, and the surveyed description of the well (either footages or the quarter-quarter section, the section, township and range). The Indian lessor's name may also be required. All markings shall be legible, and in a conspicuous place.

7. Site Security (43 CFR 3162.7.5)

- a. Oil storage facilities shall be clearly identified with a sign, and tanks must be individually identified (43 CFR 3162.6(c)).
- b. Site security plans shall be completed within 60 days of production startup (43 CFR 3162.7-5(c)).
- c. Site facility diagrams shall be filed in this office within 60 days after facilities are installed or modified (43 CFR 3162.7-5(d)(1)).

8. Public Availability of Information (43 CFR 3100.4)

All submitted information not marked "CONFIDENTIAL INFORMATION" will be available for public inspection upon request.

Thank you for your cooperation. If you have any questions, please contact a member of our staff at 406-233-2800, or at home, after business hours as shown on the attached list.

Sincerely,



Todd D. Yeager
Field Manager
Miles City Field Office

BUREAU OF LAND MANAGEMENT, MILES CITY FIELD OFFICE
ADDRESS AND CONTACTS:

ADDRESS: 111 Garryowen Road, Miles City, Montana 59301
PHONE: (406) 233-2800
BUSINESS HOURS: 7:45 A.M. to 4:30 P.M. (Mountain Time)

<u>Title</u>	<u>Name</u>	<u>Home Phone</u>
Authorized Officer (Manager – Division of Minerals)	David Breisch Cell	(406) 852-3511 (406) 853-2801
Petroleum Engineer	Paul Helland	(406) 951-4550
Supervisor –Natural Resource Specialist	Dan Benoit	(406) 234-7153
Natural Resource Specialist	Jon David	(406) 234-9156
Natural Resource Specialist	Rick Lang	(406) 232-6095
Natural Resource Specialist	Dan Fox Cell	(406) 234-0209 (406) 853-4209
Natural Resource Specialist	Irma Nansel	(406) 234-8981
Petroleum Engineering Technician	Chris DeVault Cell	(406) 234-0784 (406) 853-3643
Petroleum Engineering Technician	Dennis Hutchings Cell	(406) 234-5460 (406) 853-1750
Petroleum Engineering Technician	Brian Nansel Cell	(406) 234-8981 (406) 853-2840
Petroleum Engineering Technician	Brian Hubbell Cell	(406) 234-1667 (406) 852-0078